

Assessing the impact of pharmacist-led medication group on healthcare utilization outcomes in psychiatric inpatients

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Conflict Disclosure

- No members of the investigator group have actual or potential conflicts of interest to disclose

Learning Objective

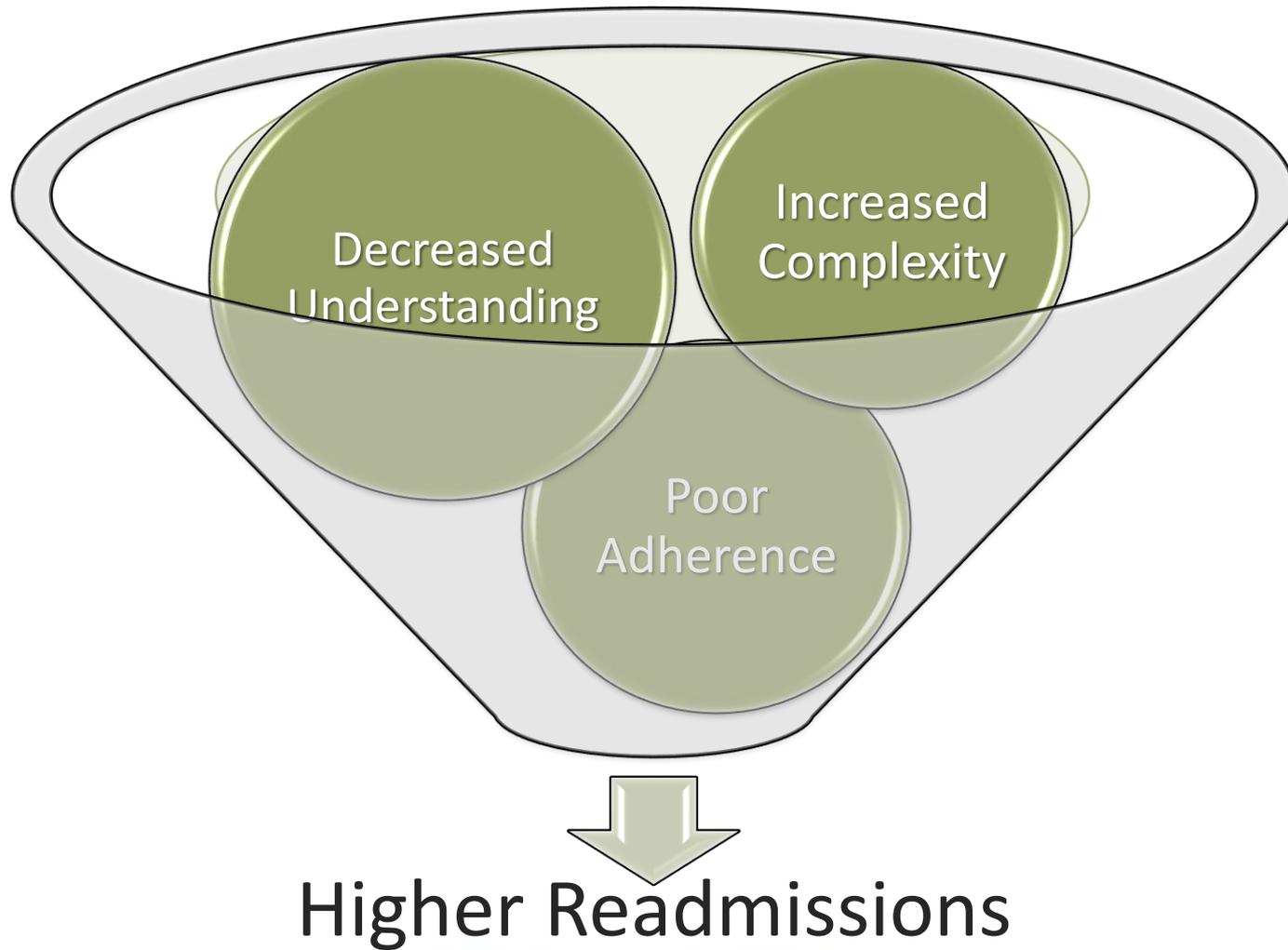
- Recognize the impact of pharmacist-led medication group on healthcare utilization outcomes in psychiatric inpatients

Mercy Hospital – Springfield, MO

- Multi-state health system with locations in Arkansas, Kansas, Oklahoma, and Missouri
- 886-bed acute care community hospital
- Level 1 adult trauma, STEMI, stroke, and burn center
- 42-bed inpatient psychiatric unit

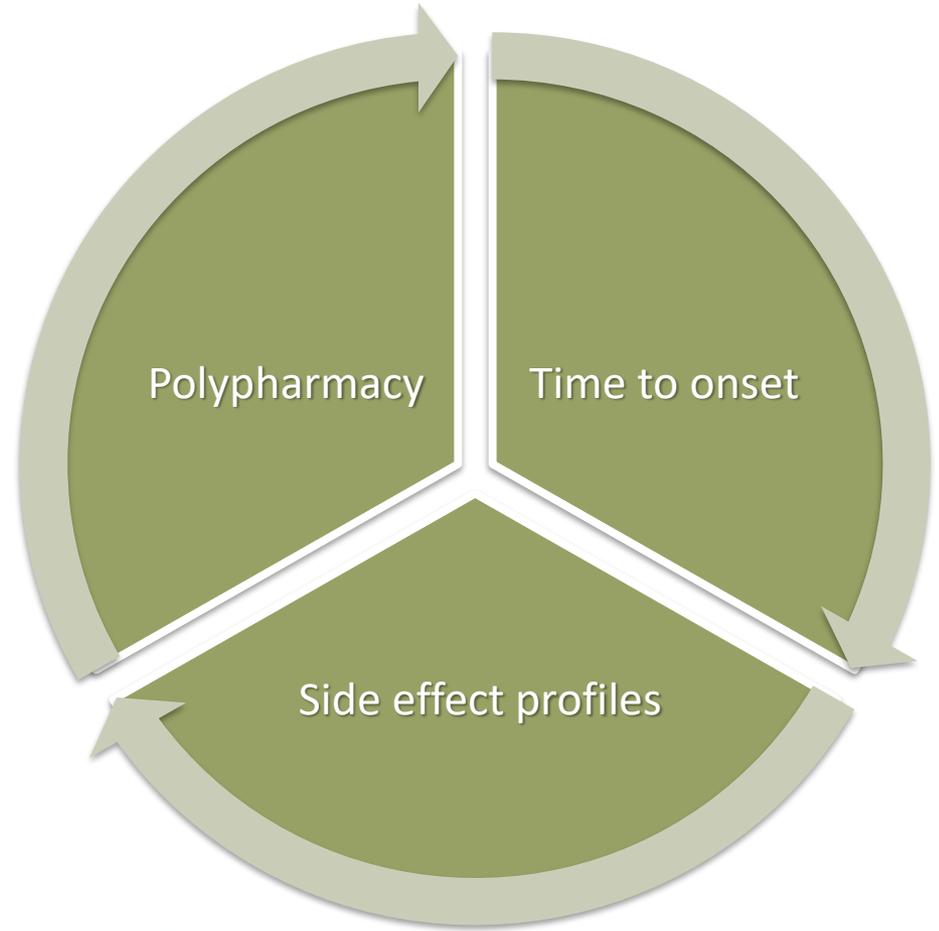


Challenges in Treating Mental Illness



Challenges in Treating Mental Illness

Complexity of medication regimens



Challenges in Treating Mental Illness

Understanding of medications

Stigma around needing psychotropic medications

The feeling of medications making mental illness “worse”

“Feeling better” means medications aren’t required anymore

Medication Adherence in Mental Illness

- Taj F, et al
 - N=128
 - Cross-sectional study
 - Average adherence among patients who experienced:
 - Depression=61.53%
 - Psychosis=58.82%
 - Bipolar disorder episodes=73.91%
 - Reasons for non-adherence included:
 - Sedation 30%, medication cost 22%, forgot medication 36%
 - **Inability of the physicians to explain timing and dose 92%**
 - **Inability of the physicians to explain benefit of medication 76%**

Medication Adherence in Mental Illness

- Rekha R, et al
 - N=100
 - Cross-sectional study
 - Evaluated reasons for non-adherence
 - Main factors are associated with poor infrastructure in the society and lack of basic information about mental illness
- Abdullah-Koolmees H, et al
 - N=1324
 - Retrospective chart review
 - Rate of patients who discontinue therapy at discharge
 - **Medication discontinuation** occurred in **69.8%** of patients in the 3 months following discharge from a psychiatric hospital

Readmissions in Mental Illness

- Kartha A, et al
 - N=144
 - Prospective cohort study
 - Patients with a positive screen for major depression at admission were **3 times more likely to be rehospitalized** within 90 days
- Saravay SM, et al
 - N=273
 - Convenience sample
 - Patients with a psychiatric comorbidity such as depression spent **twice as many days rehospitalized** over a 4-year period

Medicare Readmission Rates

- Medicare patients associated with risk of readmission
 - ...depression, psychoses, alcohol or drug dependency
- 300,000 Medicare beneficiaries with psychiatric discharges
 - 29% of patients had 2 or more discharges during the same year
 - These patients had greater average length of admissions than those who were not readmitted
 - 20% of these patients were readmitted within 60 days

CMS Measures

- IPFQR key elements
 - Overall readmission rates
 - Medication continuation following inpatient psychiatric discharge

Medication group

- Help explain medications while enabling patients to participate in their own care
- Barker DA et al
 - N=137
 - Satisfaction questionnaire and retrospective chart review
 - **39%** of psychiatric inpatients felt their treatment was **not adequately explained to them**
 - No difference in psychiatric readmissions, but did find a difference in Emergency Department admissions for patients who attended two or more groups

Medication group at Mercy Springfield

- Implemented in 2019
- Once weekly, 30 minutes, open-floor
- Retrospective review of survey results

	Before Group N (%)	After Group N (%)	P-value	NNT
Patients felt they knew <i>why</i> they were taking their medication	37 (82)	43 (95.5)	0.044	8
Patients felt they knew the <i>side effects</i> of their medication	20 (44)	39 (86.7)	<0.001	3

Primary Objective

- To compare psychiatric admission and readmission rates before and after attendance of a pharmacist-led medication group for hospitalized psychiatric patients

Secondary Objectives

- To compare the following endpoints occurring 90 days before and after attendance of medication group
 - Psychiatric- or psychiatric medication-related Emergency Department visits
 - Overall admission and readmission rates
- To compare characteristics of patients who attended a pharmacist-led medication group to those who did not attend

Study Design



Outcomes

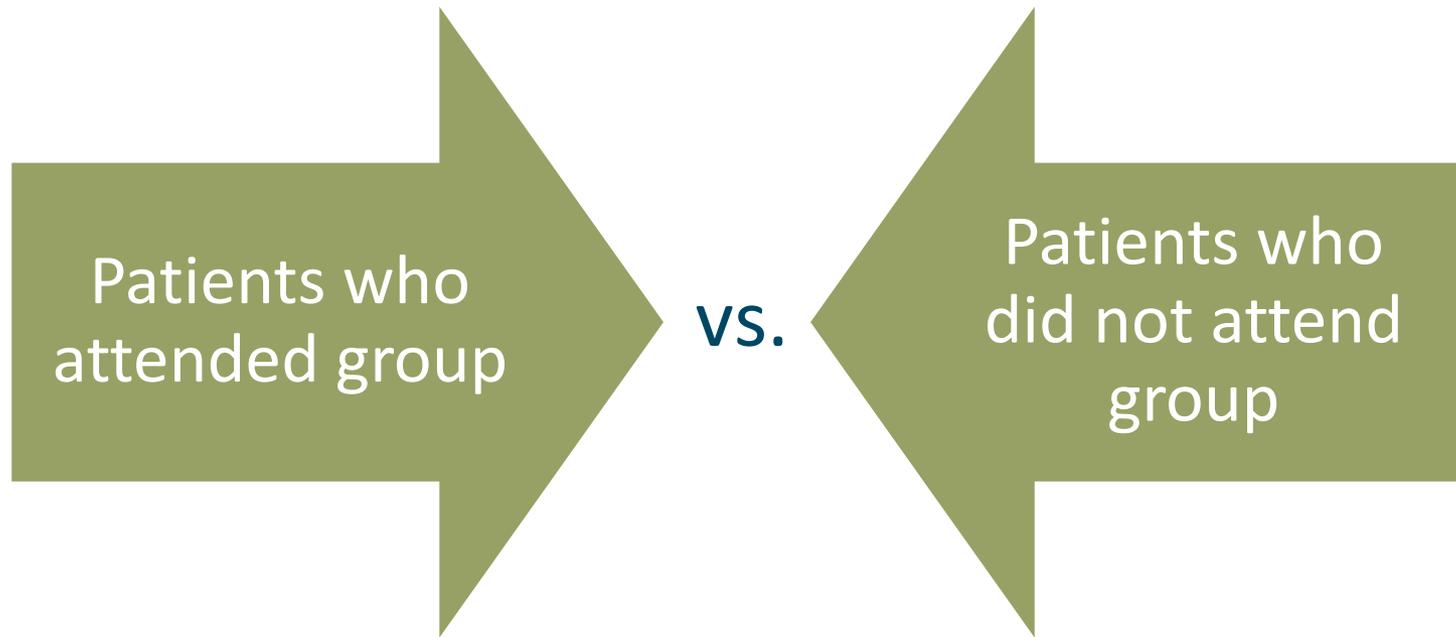
Primary Outcome:

- Change in 90-day psychiatric-related admission and readmission rates for patients before and after medication group

Secondary Outcomes:

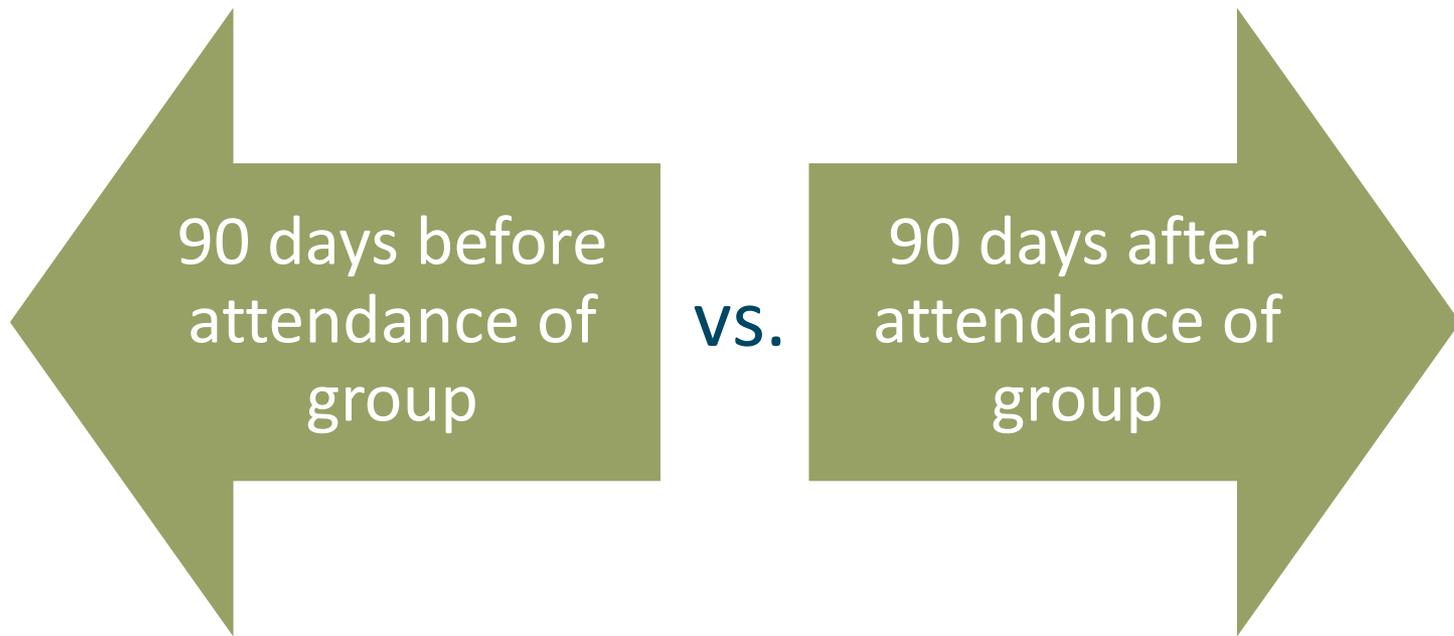
- Change in overall 90-day readmission rates for patients before and after medication group
- Change in 90-day psychiatric-related Emergency Department visits before and after medication group
- Baseline patient demographics for patients who attended group compared to those who did not attend group

Study Groups: Demographic Outcomes



“Attendees vs non-Attendees”

Study Groups: Outcomes related to admissions/readmissions/ER visits



“Attendees- Comparison to self”

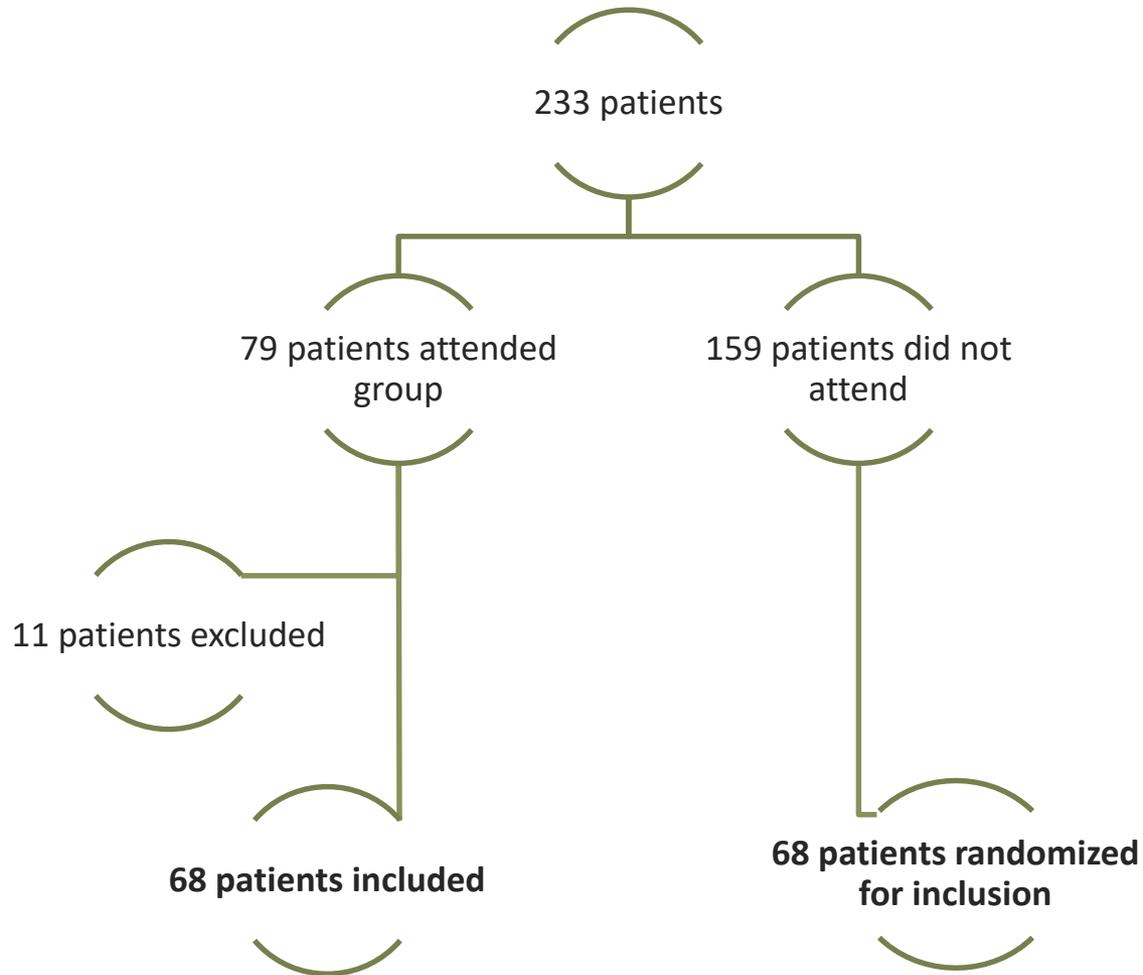
Study Population

Inclusion	Exclusion
All patients admitted to the Marian Center B unit at the time of a pharmacist-led medication group during the study period	Patients who were not discharged prior to November 30, 2019
Ages 18 years of age or older	Patients with no accessible health records prior to evaluated admission

Statistical Analysis

- Demographic outcomes
 - Independent paired t-test
- Change in overall 90-day readmission or Emergency Department visits
 - Two-tailed student t-test
- Binary data
 - Chi squared test

Results



Results: Demographics

	Group attendees	Non-group attendees	P-value
Age, mean	36.6	38.9	0.13
# of psychotropic medications per patient, mean	3.8	3.4	0.06
Male, total (%)	38 (56)	36 (53)	0.73
Female, total (%)	30 (44)	32 (47)	0.73
Bipolar, total (%)	25 (37)	13 (19)	0.02
Depression, total (%)	16 (24)	37 (54)	<0.001
Schizophrenia-like, total (%)	9 (13)	6 (9)	0.41
Substance use disorder, total (%)	23 (34)	11 (16)	0.02
ADHD, total (%)	5 (7)	1 (1)	0.09
PTSD, total (%)	20 (29)	12 (18)	0.11
Anxiety, total (%)	26 (38)	17 (25)	0.09
Personality/mood disorders, total (%)	18 (26)	17 (25)	0.11
Homelessness, total (%)	24 (35)	25 (37)	0.86

Results

	90 days before group admission	90 days after group admission	P-value
Primary Endpoint:			
Psychiatric admissions, total	48	19	0.008
Secondary Endpoints:			
Overall admissions, total	54	33	0.148
Psychiatric-related ED visits, total	42	19	0.098

Limitations

- Retrospective analysis
- Not powered
- Unable to directly correlate findings with drug therapy
- Difficult to reach patients with depression
- Small patient population

Conclusion

- Patients who attended medication group had significantly lower psychiatric 90 day readmission rates following group compared to the 90 days before
- Patients who attended group had lower overall readmission rates and psychiatric-related ED visits for the 90 days following group, although these findings were not statistically significant
- Patients with bipolar and substance use disorder were more likely to attend group
- Patients with depression were less likely to attend group
- The number of psychotropic medications did not affect attendance of medication group

Future Directions

- Reaching disease states who do not naturally attend group
- Evaluate effect of group on medication adherence
- Compare readmission rates for patients who attended group to those who did not attend
- Cost-analysis

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